IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A transport stream recording device for recording

input transport streams on a data recording medium, comprising:

a header attachment section ~~of attaching~~ configured to attach a header to a transport

packet having said transport stream and generating a source packet; and

a record section ~~of recording~~ configured to record a predetermined ~~specified~~ number

of said source packets on said data recording medium as aligned units,

wherein the data length of said aligned units is equivalent to an integer multiple of the

sector length of said data recording medium.

Claim 2 (Currently Amended): A transport stream recording device according to

claim 1, further comprising:

a counter ~~for counting~~ configured to count the number of transport packets having

said transport stream; and

null packet generator ~~for generating~~ configured to generate null packets according to

the count from said ~~counting means~~ counter.

Claim 3 (Original): A transport stream recording device according to claim 1,

wherein the beginning of each said aligned unit is periodically placed in the beginning of a

sector.

Claim 4 (Canceled)

Claim 5 (Original): A transport stream recording device according to claim 3, wherein said sector length is equivalent to a multiple of the data length of said aligned unit.

Claim 6 (Currently Amended): A transport stream recording device according to claim 3, further comprising:

a detector ~~for detecting~~ <u>configured to detect</u> transport packets containing entry points from among said transport packets; and

a map generator ~~for generating~~ <u>configured to generate</u> an entry point map listing with transport packet positions containing said entry points.

Claim 7 (Currently Amended): A transport stream recording device according to claim [[3]] <u>6</u>, wherein said map generator lists the PTS of ~~said~~ <u>an</u> I picture in said entry point map <u>listing</u>.

Claim 8 (Currently Amended): A transport stream recording method for recording input transport streams on a data recording medium, comprising the steps of:

adding a header to the transport packet comprising the transport stream; and

recording a predetermined specified number of said source packets on said data recording medium as aligned units,

<u>wherein the data length of said aligned units is equivalent to a multiple of the sector length of said data recording medium.</u>

4

Claim 9 (Original): A transport stream recording method according to claim 8, further comprising the steps of:

counting the number of transport packets comprising said transport stream; and

generating null packets according to the count value from said counting step.

Claim 10 (Original): A transport stream recording method according to claim 8, wherein the beginning of each said aligned unit is periodically place in the beginning of a sector.

Claim 11 (Canceled).

Claim 12 (Original); A transport stream recording method according to claim 10, wherein said sector length is equivalent to a multiple of the data length of said aligned unit.

Claim 13 (Currently Amended): A transport stream recording method according to claim 10, further comprising:

~~a step of~~ detecting transport packets containing entry points from among said transport packets; and

~~a map generator step of~~ generating an entry point map listing the transport packet positions containing said entry points.

Claim 14 (Currently Amended): A transport stream recording method according to claim [[10]] 13, wherein said transport stream recording method comprises a step of listing the presentation time stamp (PTS) of [[the]] an I picture in said entry point map listing.

Claim 15 (Currently Amended): A ~~program recording medium recorded with a computer-readable program for~~ computer readable carrier including program instructions that cause a computer to implement a method of recording transport stream programs ~~on a data,~~ the recording ~~medium, wherein said program recording medium comprises~~ method comprising:

~~a header attachment step of~~ attaching a header to a transport packet constituting a transport stream and generating a source packet; and

~~a step of~~ recording a predetermined specified number of said source packets on said data recording medium as aligned units,

wherein the data length of said aligned units is equivalent to a multiple of the sector length of said data recording medium.

Claim 16 (Currently Amended): ~~A program recording medium recorded with a computer-readable program,~~ The computer readable carrier of claim 15, wherein the computer program instructions that cause a computer to implement a method of recording transport stream program further ~~comprising~~ comprises the steps of:

counting the number of transport packets comprising said transport stream; and

generating null packets according to the count value from said counting process.

Claim 17 (Currently Amended): ~~A program recording medium recorded with a computer-readable program according to~~ The computer readable carrier of claim 15, wherein the beginning of each said aligned unit is periodically placed in the beginning of a sector.

Claim 18 (Canceled).

Claim 19 (Currently Amended): ~~A program recording medium recorded with a computer-readable program according to~~ The computer readable carrier of claim 17, wherein said sector length is equivalent to a multiple of the data length of said aligned unit.

Claim 20 (Currently Amended): ~~A program recording medium recorded with a computer-readable program according to claim 17,~~ The computer readable carrier of claim 15, wherein the computer program instructions that cause a computer to implement a method of recording transport stream programs further ~~comprising~~ comprises:

a ~~step of~~ detecting transport packets containing entry points from among said transport packets; and

a map generator step of generating an entry point map listing the transport packet positions containing said entry points.

Claim 21 (Currently Amended): ~~A program recording medium recorded with a computer-readable program according to claim 17 wherein said program recording medium~~ The computer readable carrier of claim 20, wherein the computer program instructions that cause a computer to implement a method of recording transport stream programs comprises a step of listing the PTS of [[the]] an I picture in said entry point map listing.

Claims 22 – 26 (Canceled).

Claim 27 (Currently Amended): A transport stream reproduction device for reproducing the transport stream recorded in aligned units on the recording medium, comprising:

a reproduction section;

a calculating section ~~for calculating~~ configured to calculate the address corresponding to the designated reproduction start position; and

a controller ~~for controlling~~ configured to control said reproduction section so that read-out of said transport packets starts from the calculated address,

wherein said aligned units are comprised of a predetermined specified number of collected source packets attached with headers to constitute said transport stream.

Claim 28 (Original): A transport stream reproduction device according to claim 27, wherein said controller further controls the reproduction section to acquire an entry point map from said recording medium, compares the PTS listed in said entry point map with said designated reproduction start position, and searches the entry points adjacent to said specified reproduction start position; and said calculation section calculates the address corresponding to said entry points recorded in said transport packet.

Claim 29 (Currently Amended): A transport stream reproduction device according to claim 27, further comprising:

a deletion section configured to convert a designated deletion range into said aligned unit data region and to delete said converted aligned units recorded on said transport stream.

Claim 30 (Original): A transport stream reproduction method for a transport stream reproduction device for reproducing transport streams recorded in aligned units recorded on a recording medium comprising the steps of:

calculating the address corresponding to the designated reproduction start position; and

reading out said transport packet from said calculated address and control the start of said reproduction section,

wherein said aligned units comprises a predetermined specified number of collected source packets attached with headers to constitute said transport stream.

Claim 31 (Original): A program recording medium for recording a transport stream reproduction program readable by computer for reproducing transport streams recording in aligned units on the recording medium, wherein said transport stream reproduction program comprises the steps of:

calculating the address corresponding to the designated reproduction start position;

reading out said transport packet from said calculated address and controlling the start of said reproduction section,

wherein said aligned units comprises a predetermined specified number of collected source packets attached with headers to constitute said transport stream.

Claim 32 (Original): A transport stream recording device for recording transport streams in sector units of data on a data recording medium, comprising:

header attachment means for attaching a header to a transport packet constituting a transport stream and generating a source packet;

classifying means for subdividing said source packet into a specified number of pieces
and generating an aligned unit; and

record means for recording said aligned units on said recording means,

wherein the data quantity of the aligned unit is equivalent to a multiple of the data
quantity recordable on one sector of said data recording medium.

Claim 33 (Original): A transport stream recording device according to claim 32,
further comprising:

counting means for counting the number of transport packets having the transport
stream; and

null packet generating means for generating null packets according to the count from
said counting means.

Claim 34 (Original): A transport stream recording device according to claim 32,
further comprising:

counting means for counting the number of transport packets having the transport
stream;

detection means for detecting transport packets having data serving as reproduction
start positions, from among transport packets constituting said transport streams; and

means for making entry point maps for specifying the transport packets containing
said data serving as reproduction start positions.

Claim 35 (Original): A transport stream recording device according to claim 34,
wherein said detecting means detects transport packets containing I picture data as the

transport packet containing data serving as reproduction start positions, and said means for

making entry point maps writes the count from said counting means for said transport packets

containing said I picture data into the entry point map, and also writes said I picture PTS into

said entry point map.

Claim 36 (Currently Amended): A transport stream recording method of a transport

stream recording device for recording input transport streams in sector units of data on a data

recording medium, comprising:

a header attachment step of attaching a header to a transport packet constituting said

transport stream and generating a source packet;

a classifying step of subdividing the source packet generated in the header attachment

step into a specified number of pieces each [[and]] to generate an aligned unit; and

a record step of recording the aligned units on said data recording medium,

wherein the data quantity of the aligned unit is equivalent to a multiple of the data

quantity recordable on one sector of said data recording medium.

Claim 37 (Currently Amended): A program recording medium for recording a

transport stream recording program for recording the input transport streams in sector units of

data on a data recording medium, wherein said transport stream recording program

comprises:

a header attachment step of attaching a header to a transport packet constituting a

transport stream and generating a source packet;

a classifying step of subdividing the source packets generated in said header

attachment step into a specified number of pieces and generating an aligned unit; and

~~a record step of~~ recording the aligned units on said data recording medium,

wherein the data quantity of the aligned unit is equivalent to a multiple of the data

quantity recordable on one sector of said data recording medium.

Claim 38 (Currently Amended): A data recording medium ~~recorded with~~ <u>having a</u>

transport stream <u>recorded thereon</u> by a transport stream recording device, ~~wherein said data~~

~~recording medium is recorded with aligned units each subdivided into specified numbers of~~

~~source packets with headers attached to transport packets and constituting said transport~~

~~stream, and the data quantity of the aligned unit is equivalent to a multiple of the data~~

~~quantity recordable on one sector of said data recording medium~~ <u>in accordance with the</u>

<u>method of claim 8</u>.

Claim 39 (Currently Amended): A transport stream reproduction device for

reproducing the transport stream recorded in aligned units on the recording medium,

comprising:

specifying means for specifying the reproduction start position, a calculation means to

calculate the address of said data recording medium corresponding to said designated

reproduction start position; and

read-out means for starting readout of said transport packet from address on said data

recording medium calculated by said calculation means<u>,</u>

<u>wherein the data length of said aligned units is equivalent to a multiple of the sector</u>

<u>length of said data recording medium.</u>

Claim 40 (Currently Amended): A transport stream reproduction device according to claim 39, further comprising:

acquisition means for acquiring an entry point map from said data recording medium; and,

searching means for comparing the specified reproduction start position with said PTS listed in said entry point map and searching for the entry point adjacent to said specified reproduction start position,

wherein said calculation means calculates the address of said recording medium recorded in said transport packet corresponding to said entry point, using the count contained in said entry point map.

Claim 41 (Original): A transport stream reproduction device according to claim 39, further comprising:

conversion means for converting a specified erase range into data area for said aligned units; and

deletion means for deleting said transport stream recorded in said data area for said aligned units converted by said conversion means.

Claim 42 (Currently Amended): A transport stream reproduction method for a transport stream reproduction device for reproducing transport streams recorded in aligned units recorded on a data recording medium, comprising:

a specifying step of specifying the reproduction start position;

a calculation step of calculating the address of said data recording medium corresponding to said designated reproduction start position; and

13

a read-out step of starting readout of said transport packet from <u>said calculated</u> address on said data recording medium calculated by said calculation means.

Claim 43 (Currently Amended): A program recording medium for recording a transport stream reproduction program, readable by computer, for reproducing transport streams recorded in aligned units recorded on a data recording medium, wherein said transport stream reproduction program comprises:

a specifying step of specifying the reproduction start position;

a calculation step of calculating the address of said data recording medium corresponding to said designated reproduction start position; and

a read-out step of starting readout of said transport packet from the address on said data recording medium calculated in the processing of said calculation step<u>, the data length of said aligned units being equivalent to a multiple of the sector length of said data recording medium</u>.

Claim 44 (New): A medium according to claim 38, wherein said source packet contains null packets.

Claim 45 (New): A medium according to claim 38, wherein the beginning of each said aligned unit is periodically placed in the beginning of a sector.

Claim 46 (New): A medium according to claim 38, wherein said sector length is equivalent to an integer multiple of the data length of said aligned unit.

Claim 47 (New): A data recording medium having a transport stream expressed

thereon in accordance with the method of claim 8.